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# Health

## A Journal Devoted to Healthful Living

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**EDITORIAL**

# Rural Welfare in India

There is no subject more engrossing the attention of the Government of India and the various political and social organizations in this country, at the present day than rural welfare. Mahatma Gandhi has started "the All-India Village Industries Association" with a view to place the Indian villages, now rapidly declining in health, strength and stamina, for want of sufficient nourishing food, on a sound economic basis. The Government of India have granted a generous donation of one crore of rupees for rural uplift, which, we trust, will be in the nature of a recurring grant in the future, until all the villages in India have reached the high water-mark of sanitary and economic conditions obtaining in other civilized countries of the world. This grant has been distributed to various Provinces and Madras has got for its share 14 lakhs which the Provincial Government propose to spend as under :—

Rs. 5½ lakhs for rural development and water supply schemes.

Rs 4½ lakhs for village communications.

Rs. 3 lakhs for Bore-holer latrines in about a hundred villages in each district, which include Rs. 25 000 for Poonamalle Sanitary Scheme.

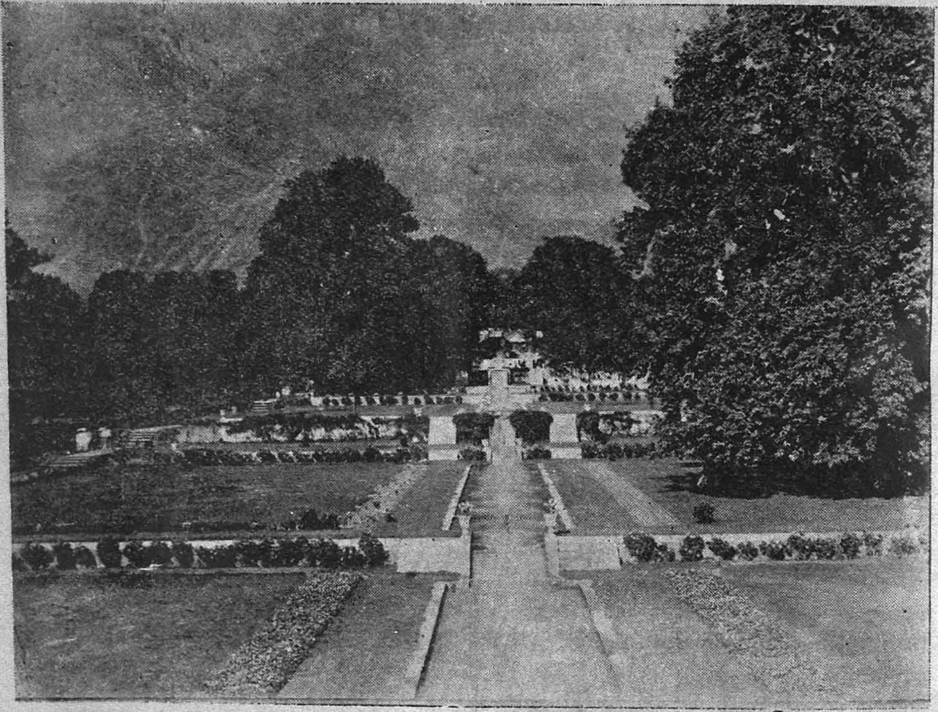
Rs. 50,000 for anti-malarial propaganda in four or five selected districts.

Rs. 50,000 for discretionary grants to District Collectors to be spent on rural amenities.

Now, it may pertinently be asked, what connection there is between our "Health" and "Rural Welfare". In fact, when in October 1934, exactly a year ago, we dwelt on the question of "Health in relation to unemployment" editorially, in our "Health", the question of its suitability for discussion in a Health Journal was seriously raised by one of our subscribers in the North of India and any amount of explanation on our part left him unconvinced. But, we have

no reason to regret our folly, even if it be considered as such, for, we find that the very scheme we adumbrated at the end of our article (page 196, Oct 1934 issue of Health) has been adopted by the progressive State of Mysore with effect from January 1935 and quite recently has been pressed by correspondents in the lay press on the attention of the Madras Government. Our only apology, therefore, in introducing this or similar subjects in 'Health' is that we consider that anything that is conducive to the health of the people, either in the form of health rules and maxims, "Do's" and "Don'ts" or suggestions to the powers-that-be for the amelioration of the lot of the people, by sanitary, hygienic and economic measures, is a fit theme for our Editorial.

Coming to the subject proper, we are glad to note that a large slice of the grant is set apart for roads and water supply. These are the two essential requisites to make the villages happy, healthy and contented. With regard to the village roads, we are afraid that nearly 50% of the allotment will be swallowed up by the supervising staff and contractor's profits. The minimum of staff must be employed for the purpose and the villagers themselves must be induced to take active interest in road-forming. They will be ready and willing to supply free labour or labour at a nominal rate and if each village provides the neces-



*Parks and pleasure gardens are among the amenities of life.*
*Nishat Bagh (Government garden), Fountains, Cataracts etc.*

sary labour free or cheap and if road-materials are obtained from the lowest tenderer, there will be a good deal of savings effected, which may be utilized for forming more roads.

With regard to water-supply, there are already tanks in each village which might be repaired, deepened and reserved for drinking purposes. The old system of appointing a watchman to guard and protect these water-supplies may be revived and defiling protected water-supplies may be made penal. In places where no tanks exist, wells must be sunk and these wells must be provided with a pump, so that water might be taken through taps. Otherwise, there is danger of infected pots, utensils etc., being used for drawing water and the water-supply being thus contaminated.

The other amenities for which provision has been made must take the form of village schools. While the construction of Bore-hole latrines is a sanitarily good idea, we doubt if the villagers would avail themselves of those latrines.

Economy must be the watch-word in the execution of these works, and the villagers must be taken into confidence and their co-operation enlisted to make the scheme a success.

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"*With health, everything is a source of pleasure ; without it, nothing else, whatever it may be, is enjoyable. It follows that the greatest of follies is to sacrifice health for any other kind of happiness, whatever it may be, for gain, advancement, learning, or fame, let alone, then, for fleeting sensual pleasures*"—SCHOPENHAUER.

# Measles

*By*

DR. L. SESHADRINATHAN, M.B.B,S.

*Coimbatore,*

MEASLES, like Chicken Pox described in the July issue of this magazine is a highly infectious disease, and is one of the '*Ammais*'. It is variously known in Tamil as 'CHICHILIRPU' (சிச்சிலிர்ப்பு) 'THATTU AMMAI' (தட்டம்மை) or 'MANAL VARI' (மணல்வாரி). This, like Chicken Pox is common in childhood and occurs in epidemics. Infants in arms are generally not attacked, and one attack protects that person from further attacks. The contagion takes place through the air, dust, and usually by direct contact with patients. Like Chicken Pox, this disease is infective even before the rash comes out.

Except when present in an epidemic form, the beginning of the disease is passed off as a "mere cold" or a feverish cold which lasts for about three or four days. In very young children the first symptom to be noted may be convulsions, but generally the onset of the disease is gradual. There is slight fever at first, but gradually (especially if the child is a fair-skinned one) the face becomes reddish ; there is running from the nose and eyes ; the eyes are red : the tongue becomes coated with white fur ; and the mouth and edges of the tongue and perhaps the throat appear reddish. All these symptoms and head-ache and fever last usually three to four days when they are aggravated ; the child now appears very ill and the rash makes its appearance. It is first seen about the ears, temples and face, in the form of

small dull reddish raised spots tending to run in clusters and usually roughly crescentic in distribution. It causes the face to assume a blotchy appearance. The rash then spreads rapidly over the neck, body and the limbs, and is usually fully developed in two or three days. The face looks swollen and reddish, and the appearance of a "very severe cold in the head" is characteristic. This sort of picture goes on till the fifth or sixth day of the onset of the fever, when the temperature falls rapidly, and often causes hope and fear alternatively in the parents' minds. After the fall of temperature, the rash usually persists for two or three days, and then fades rapidly, but leaves the skin somewhat mottled by reddish-brown stains for some days afterwards, and it is often followed by slight branny desquamation—that is, separation of scales that look like fine bran. The characteristic mottled appearance of the rash has probably given rise to the name 'CHICHILIRPU' (சிச்சிலிர்ப்பு) and the blotchy clustered appearance to 'THATTU AMMAI'. Generally, with the falling off of the rash the symptoms of cold and fever gradually subside, and the general condition of the child improves. But if the fever, "cold" and cough persist, then it is probably due to some other trouble like pneumonia, bronchitis *etc.* due to inadequate care of the child during its illness. In some cases a chronic cough may be left behind ; in others a discharge of pus from the ears ; and in yet others more serious conditions. Therefore, every case of Measles must be attended to by a physician from the beginning, or at any rate from the time the diagnosis of Measles has been made. Very often a child of poor constitution is left a victim to tuberculosis of the lungs.

Measles is highly contagious in the stage preceding the appearance of the rash, as also when the rash is present, and there are cases known where the infection has been spread as late as three weeks after the disappearance of the rash. It would, therefore, be better to let a month elapse before the convalescent child is allowed to mix with other children Measles is chiefly conveyed directly from the sick to the healthy, but it is sometimes carried through the medium of healthy persons attending on the sick by their clothing conveying the infective matter in saliva, nasal discharges and soiled clothing. Isolation of the sick child with Measles would be the ideal thing, but this is not practicable to any appreciable extent, especially in the the middle-class family-houses, and impossible in the poorer homes, except perhaps by removing the child to an isolation hospital. But, wherever possible, all delicate children (and, of course, healthy children too) should be scrupulously kept away from the sick child. Apart from this, isolation to be effective, it must be put into practice quite early, not when the rash appears but at the very onset of the disease, when alas, it is often passed off for a cold and so regarded as anything but serious ! If there is Measles in a house, the best thing the parents can do is to give the other children a holiday from school for at least two weeks from the onset of the fever, and one month must be allowed before the convalescent child from Measles returns to school.

In the majority of cases, an attac

of Measles is passed through safely, and the common knowledge of this fact leads many people to regard it lightly. This is a wrong attitude to take, as a few poor weak children are left prey to tuberculosis of the lungs and other such serious complications.

Treatment is best left in the hands of a qualified doctor, but nursing can be done by an understanding mother or other relative. Confinement to bed in a well-ventilated room, a liquid diet with plenty of fruit juices, abundance of cooled boiled water for the patient to drink are generally the only measures necessary in ordinary cases. If the child has photo-phobia, that is, sensitiveness to bright light, the room should be darkened, due allowance being made for proper ventilation. The eyes may be bathed twice or thrice a day with boracic lotion. The bowels should be kept free, and if cough is troublesome the attending doctor may prescribe a suitable mixture or steam-inhalation with Friar's balsam or some such measure. The patient should be kept in bed for a few days after the fever subsides. During the stage that the rash begins to fall, the skin should be oiled freely with carbolised oil, and warm baths with a mild antiseptic soap given daily. The mouth and nose should be carefully cleaned. The convalescence is the most important stage, and watchfulness and care during this stage may prevent serious complications.

Apropos my last article on Chicken Pox in the July number, where I had mentioned the case of a nursing mother being allowed to nurse her baby while she herself had Chicken Pox, it is interesting to record here, that true to my expectations and in accordance with the popular belief that '*Ammai*' does not enter the cradle, the baby has escaped the disease so far and now it is nearly four months since the mother had the attack of Chicken Pox. Probably immunity to the disease was conveyed through the mother's milk.

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## THREE COLDS A YEAR IS WHAT VICTIMS MUST EXPECT

*A person who is subject to colds may count on at least three colds a year, his "fall cold," his "winter cold" and his "spring cold," but has a good chance to escape other colds between these fateful dates, it is reported in a memorandum on colds prepared for the British Tuberculosis Council by Dr. Ernest Ward. The chief thing that helps one to catch cold, Dr. Ward believes to be individual susceptibility. Some people naturally catch cold easily. Others almost never catch cold. No one knows just why these differences exist. Heredity may be one cause, Diet, general health, habits of rest and so on also may be important. Statistics of most communities show that there are veritable epidemics of colds three times a year; the fall cold of October or November, the winter cold of January and February and the spring cold of April or May. For some reason which is also mysterious, either the cold germs are more active at these times or else the average resistance of the population is decreased. At these times, persons who naturally are susceptible are beset so powerfully by the many germs sprinkled around the neighbourhood that Dr. Ward considers it almost hopeless for these people to escape. At other times of the year, even these susceptible persons usually can protect themselves by keeping away from other people with obvious colds, by avoiding excessive chilling of the skin or excessive fatigue, and by taking regular doses of cod liver oil during the fall and winter. None of the popular methods of avoiding colds such as cold baths, special diets, vitamins, gargles or nasal sprays or douches, stir Dr. Ward to any enthusiasm.—Dr. E. E. Free,* THE WEEK'S SCIENCE.

—Thr' AMERICAN MEDICINE.

# Ways and Means to Longevity

*By*

DR. K. VENKAT RAO,

*Purasawalkum, Madras.*

"HEALTH is man's birth-right, and it is just as natural to be well as to be born". There is some truth, I think, in what one says "A man is just as much responsible for his ill-health as he is for his ill actions, and thus the same should become punishable under law". Dr. Pyle says that "persons who treat their bodies as they please and transgress rules of personal hygeine of which they should have a definite understanding are physical sinners, and they are not only committing a crime against themselves, but often against their dependents and future generations". Longevity can be attained only by observing the rules of hygienic living which makes life more livable. It is the sacred duty of an individual to take care of his own body. Mr. Emmerson says that the strong receive their strength as easily as the weak get their weakness from nature. Everything depends upon the co-operation that we offer to Nature.

*'The strong receive their strength...from Nature'*
ARTHUR SANTELL, *who claims to be the world's strongest youth, is seen here as he pulled twelve thousand pounds of automobiles and feminine loveliness at the Century of Progress Lagoon in Chicago. Santell does other remarkable feats to entertain visitors to the fair.*

It is a disgrace to be sick. It shows not only physical weakness but want of moral courage as well. It is the result of not heeding to the initial warning of Nature. Nature warns us by trifling symptoms. If we do not attach the required amount of importance to those warnings and continue to violate and transgress the laws of Nature, *i.e.* if we openly defy her, Nature retaliates as it were with her weapon-diseases.

Several factors go to confer long years of useful life. Longevity will be welcome, if the following definition of an ideal healthy life is visualised. Though there would be a certain slow change that amounts to ultimate deterioration, there should not be sudden failure of function of any organ, no notable discomfort in any part, no headache, no single sleepless night, no tinge of rheumatism and not even a day's work and recreation lost. This ideal though looks Utopian, can be attained if the laws of Nature are understood and faithfully followed. To such followers of hygienic laws, a period of 50 years from 30 will be the happiest one.

What is the span of life for an individual? One hundred and twenty years is considered the full number of years that one can attain to live. The common cause of death is accident, which term includes disease as well. In young age, many of the diseases are overcome by high power of resistance; but as age advances, there is poor resistance and many of the diseases brought about slowly and insidiously make their presence felt and known and, now the body is unable to repel the attack. Elimination and nutrition are the two important factors, the proper balance of which confers health and longevity. Dr. Crew experimenting upon the plantarian, has conclusively proved how the life of that worm has been extended over twenty-eight times its normal span of life by what is known as "the starvation system".

What is it that Nature demands of an individual creature? She wants that it should propagate. After the period of fertility is over, she wants that they should soon give place to the new comers, by their disappearance. So, in the case of man after his period of fertility is over, *i.e.*, from 25 to 50 years, she expects him soon to retire. So, what generally happens is Nature, as it were, plays a mean trick. The appetite, the satisfaction of which necessitates a large intake of food that was necessary for growth and propagation is retained even though he no longer now needs the same quantity of food, as growth and fertility have long ceased to exist. So, then, the excess of food that is consumed especially the carbohydrates and the hydrocrbons (fats) are stored as cumbersome fat in various situations, commencing from the abdominal wall, then limbs, etc. and ultimately reaching the vital organs such as, heart, liver. the kidneys, etc. This results in improper functioning of these organs, resulting in early death. The majority die before they cross the 60th year. That is, they dig their graves with their teeth, to quote an old Roman saying: Another Roman proverb declares that "Gluttony kills more than the sword" which, perhaps is not less true even at the present enlightened 20th century.

If we look at a person passed the age of seventy, we will find that he is

invariably lean with a spare constitution. He will never be stout. The centenarians are all of that stature.

The following factors, which, if rightly followed, will lead to perfect health and longevity will be briefly described, so as to give a stimulus for further study in those directions.

**Food**

That appetite is the guide for the right quantity of food that the body needs at past the age of fertility is highly fallacious, has already been briefly stated. It is as it were, Nature's weapon to remove the unwanted from her standpoint. Therefore, it is quite necessary to realise that the diet of an individual should be considerably reduced after the age of forty or forty-five. What that amount is and of what nature, is to be determined by individual wants paying attention to the nature of his work, the amount of exercise he takes, etc. But we can only make a general statement here. Carbohydrates and fat should be considerably cut down. A man's increase in weight between 25 and 50 years should never be more than 10 to 12 pounds. If on a certain regime of diet, the weight rapidly increases, both the food factors should be reduced in quantity. It is profitable to remember that fats and carbohydrates are fuel foods. No living cell or tissue can be repaired or created without the intake of protein. Fats and carbohydrates such as butter, lard, various fats, oils, sugar and starch, etc. contain no protein at all. They are pure fuel foods. No amount of them could suffice to build a single cell of living tissue. Their function is to be burnt in the body, supplying energy. So, if fats and carbohydrates are taken in large quantity, some portion for example, very little of it, is utilised for the energy required. The remaining quantity is being deposited in the various parts of the body as fat. It may seem reasonable, therefore, to expect that this fat can be reduced by exercise without reduction in its intake. But, it is not so. Only a few ounces of fat can be reduced by such exercise; but even then, what happens is, after strenuous exercise one is believed to take more food, perhaps this excess of food intake is on the credit side. For example, the energy spent in taking a four miles walk can be replaced by a lump of sugar. A bulky man may immediately after strenuous exercise demonstrate with perhaps some pride, that his weight has come down by three or four pounds; but all this reduction barring for a trifling amount of calories of heat loss by combustion of fat, will be replaced by a tumblerful of water, as this loss is due to the water loss incidental to exercise. In what follows hereafter, I have to be a little dogmatic, in view of the shortness of time and space. It is important to remember that the best and the only way of reducing fat,as fat reduction is essential, is to cut short the intake of such fat producing foods. Periodical weighing and measuring the waist girth which is called the line of life will be a useful guide in the matter of increasing or reducing the intake of such foods.

Now, coming to the protein part of diet, we have already been told that no repair of a living cell or formation of new cells can take place without this protein. Abstention from protein will lead to starvation, anaemia,

destruction of the blood forming organs and speedy death. So, an adequate supply of protein is of paramount importance. What is that safe and essential quantity? It has been said by various people that 120 to 140 gms. of protein are necessary daily: but this is too much. For a normal person in good health, 40 to 50 gms. of protein intake is quite sufficient. A major quantity of this goes to form the red blood corpuscles. "The average life of a R. B. C. is estimated at 30 days, which implies that something over three ozs. of corpuscles, in the medium sized human body must be manufactured daily. As the R. B. C. contains 37 p. c. protein (Abderhalden), this calls for about 37 gms. of food protein as against 2 gms. maximum for waste of other body tissues."

"If we combine these figures, and take into account the gram or so of protein required to replenish the relatively scant companies of W. B. corpuscles, the analysis seems to call for about 40 gms. of protein to meet the daily needs of the body."

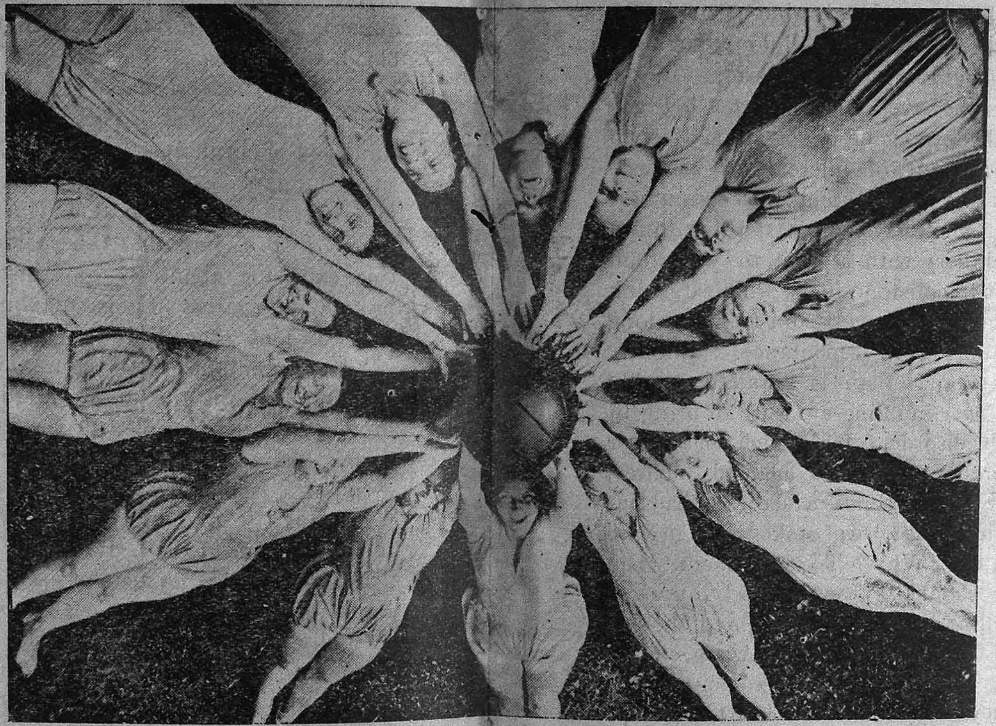
What are the dangers of excessive intake of proteins. It has been experimentally proved that a certain amount of protein as it is, finds its way into the circulation from the intestine, from food not fully digested. This is likely to occur if a larger quantity of protein is ingested. When a hearty meal is taken especially after meat food, a large number of white B.C. pour into circulation to handle the amino-acids. Some of the W. B. C. tackle the unbroken protein molecules. To these and to the R. B. C. which take up the by-products of protein digestion as effected by the W. B. C. and which are taken to the liver where they are killed and the abnoxious material discharged through bile and kidneys, we owe our safety: so a large quantity of protein calls forth a large supply of these cells, which means too much strain for blood-forming organs. Excess of protein, therefore, results in a large production of blood corpuscles and free globulins and albumins in the blood stream. But the fluid becomes too thick to be pumped through the arterial system. All these happen when one side of the question is only considered. A certain amount of protein escapes digestion and goes to the large bowel where putrefaction takes place and obnoxious toxic materials are absorbed into the system. Among the recognised results direct and indirect of such poisoning are:—" (1). Destruction of B. C. with resultant anaemia, simple or pernicious. (2) Impairment of the blood-forming mechanism which strikes at every vital organ. (3) Thickening of the blood with resultant high-blood pressure, damaged arterial walls and heart strain. (4) Varied types of impairment of liver (5) Disturbance of glandular functions, including stimulation of the thyroid whereby every cell in the body is made to work at abnormal speed. (6) Irritation and overstrain of kidneys (7) Menace to the brain directly from the stupefying effects of some of the poison and indirectly through impairment of the the arteries threatening apoplexy."

The destruction of the blood corpuscles and the impairment of the blood-forming mechanism amount to the removal of the chief defences against bacterial invasions. How to measure the quantity of the protein supply?. The following is easily remembered

Eight gms. of protein are found in (1) ten ozs. of milk, or (2) one egg, or (3) one ounce (1 cubic inch) of lean meat or (4) one ounce of cheese. Five ounces of vegetables contain about four grams of protein. It is useful to remember that no amount of milk will lead to obesity. Five ounces of rice contain about 12 grams of protein. Almonds contain 21% of protein, *i.e.* five ounces contain 32 gms.

*Fresh Air.*—It is needless to emphasise the importance of proper breathing. We have been told time and again, that fresh air is essential for the maintenance of health, and that such supply of air will ward off many respiratory diseases. But it is nowhere stated that in addition, we should cultivate the habit of taking some breathing exercises daily so that for a time at least, all the air cells may fully expand with pure air and that a major portion of the residual air may be expelled. In normal breathing the apices and the remote basal portions of the lungs do not fully expand with air. Expiration is not deep and so there is always some residual air. It is essential that once or twice a day we should fully flush out the lungs with fresh air by the practice of breathing exercises. Dr. Fisher of New York says "A hundred deep breaths a day is a physician's recipe for avoiding tuberculosis". Dr. Neimeyer says;—"Contrary to the general opinion, that eating and drinking are the principal functions of life, hygiene maintains that air or the vital air, as the discoverer of oxygen calls it, is the real pabulum vitae." An empty stomach, an open place, and any convenient posture are the essential preliminaries for carrying on the breathing exercises.

It is also useful to cultivate the habit of conscious breathing *i.e*, to take a few breaths even when we are through our work. Such a simple act will supply the system with a large quantity of oxygen periodically. It will be advantageous to train the diaphragm, the bellows of the human system by taking a few diaphragmatic breathing, *ie.*, by throwing out and drawing in of the abdominal wall during inspiration and expiration respectively.



*Playing with the medicine ball is a good bodily exercise. Exercise is as much necessary for women as for men.*

*Exercise.*—This should be regular. It is better to cultivate the habit of taking daily some exercises which will give benefit to every part of the body, for a period of ten to fifteen minutes. This limitation of time is advisedly fixed, because if exercise takes more time, it will never be continued unless by a very few enthusiasts. For professional men such fixing of time is quite convenient. This exercise should include some practices to train and develop the abdominal muscles, the right development of which will overcome constipation. Constipation at all costs should be avoided, as otherwise, the cess-pool below the gastric dining hall will bring on various diseases such as, auto-intoxication, anaemia, malaise, rheumatism, etc. to name only a few of a large number which directly or indirectly can be traced to stasis in the bowels.

*Hobby Riding.*—What is hobby? "A hobby is any kind of purposeful activity whatsoever, that involves definite and intelligent effort of a different kind from the effort involved in the work by which you earn a living. The point involved is the difference between work and play." The pursuit of hobby is not for money but for the joy it gives. It will keep you engaged when you reach the improbable years, *i.e.*, after you retire from your bread-earning work. If no such hobby is cultivated, the retired life will become lonely and tiresome. Many of the great discoveries resulted from hobby pursuit. Herschel, the Band-Master through Astronomy as his hobby, through a Telescope made by his own hands, discovered the hidden secrets of Heaven, and gave the world a new conception of the Universe. The preacher Priestly made Chemistry a hobby and became the discoverer of a life-iving gas, Oxygen. Wright Brothers were Bicycle dealers and during off business hours were trying to invent a machine that would fly and in this they ultimately succeeded. The American painter, Morse, who became the President of National Academy of Arts, invented electric Telegraph through his hobby. Then, there was a barber named Arkwright. He, through the pursuit of his hobby discovered Arkwright Spinning Jennies. These active hobby pursuits will keep the brain engaged. Old age will be quite welcome if such hobby rides are cultivated The world may be greatly benefitted by new discoveries. If there is nothing to keep one engaged, the other worries of trifling nature will make their adverse effects felt on the old system. So, then, this hobby riding indirectly helps to attain longevity in addition to making those improbable years bright ones.

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# Food and Health

## The Circumstances under which We Live

*By*

N. SEN,

*Resident Medical Officer, P. O. Sailo-Jherpara, Cuttack.*

I

OUR body needs food mainly for two purposes. Firstly as fuel and secondly as the material for building up its own machinery. Or in other words it may be said that we require food:—

(1) To make our bodies grow when we are young.

(2) To repair and replace the daily wear and tear of body tissues.

(3) To provide energy for the process of living.

(4) To provide energy for physical and mental work.

And perhaps this food is the first necessity of man. If we judge carefully it can be clearly ascertained that most of our diseases are not original but are created by irregularity of diet and living. While this choice of food is governed by influences of a very different kind, it depends much on custom and palate and lastly on our pocket.

If we look back thousands of years we find that natural grown vegetables were the staple food used by ape-men or man-apes. With the gradual advent of civilization our food began to take finer forms. Was it for good or for bad? Do we get enough fresh food among our dietaries now-a-days? The town dwellers are more and more taking to preserved foods without the least hesitation whether those preservatives are really good for our health! or how much of those preservatives can we consume? It has simplified our living no doubt but if we know definitely that it will do us no good we should not hesitate to refuse it.

As we have said we cannot lay the whole responsibility of discomfort to the account of microbes or bacteria. It is to a great extent our own affair. Our whole system is nothing but a machinery with a limit to work and limit to consume fuels. To eat, drink or smoke in excess must in the long run bring in repentance. Similarly less exercise than is required actually and over muffling are sure to bring in such disorders for which nature or microbe cannot be blamed. Three, four or five times a day we load our stomach *i.e.*, we stoke our inward engine. Why? To fuel them. But we should know definitely, are we fuelling them or fouling and choking the furnace with ash? Again, mortality statistics enlighten us much. They may be classified into two groups. Those dying from over-eating and those dying from under-nutrition. In richer classes it is almost an axiom that most of their diseases originate from the intestines only, due to injudicious over-feeding. While in the poorer classes there often arise such diseases due to deficiency of a certain substance in food which is necessary for life.

Let us come back to preserved foods. Preserved foods we find in the market

in several states of which the following are frequent:

(*a*) Tinned with some liquids,
(*b*) Dried,
(*c*) Vaccuum packed,
(*d*) Preserved by chemicals,
(*e*) Refrigerated or cold storage,
(*f*) Salted.

Any way they are never good for health, specially those preserved with chemicals. Gradual accumulation of common legalised preservatives *e.g.* Boric Acid, Salicytic Acid, Benzoic Acid or Sulphur-dioxide in stomach are never good for health and often cause grave symptoms. Moreover many of our foods contain such essential things in them which though present in very minute form are of enormous benefit to our system. And this content of food which we call vitamin is totally destroyed in preserved foods, perhaps only except cold storage.

II

Apart from those preservatives we are also accustomed to many other artificial foods which have got a very faint connection with the natural source or none at all. The most predominating of this type is perhaps sugar. Sugarcane cultivation in Asia is perhaps the oldest. In the 17th century sugar was regarded as a luxury in Europe! And now? Keeping off molasses even the poorest villager is now after simplifying his diet by replacing it with sugar which not only does not contain any vitamin but in excess is harmful to our system. The average consume of sweetmeats and sugar in towns is nothing short of spreading diseases and microbes amongst the ignorant public.

Wheat comes next. Wholemeal wheat is rare now. Civilization has aided our tendency towards refinement and we always seek in market the perfect white flour to prepare our breads. The innermost mass of wheat grain is only starch and the market flour contains nothing but that, as its essential portion is repeatedly sieved off. Adulteration is easier in refined flour than in whole meal flour—so market white flour (*mytha*—மைதா) apart from its starch contains chalks, stones etc.

In selecting our rice also we make similar mistakes. The more refined the rice—the less vitamin it contains. Ordinarily mill husked white polished rice is equal to white flour. In the refinery proces its vitamin content is polished off and what remains is nothing but a mass of starch which has got nothing to do in the system but to fill our stomach. Whatever residue might have remained, we do away with it in the course of taking away the surplus water after the rice has been boiled.

Thus we see that the current tendency is to over simplify our diet but we hardly consider that this simplifying is nothing but to invite our own ruin.

III

Vitamins and their importance for the living are frequently spoken of now-a-days. But what are they? what do they do?

As the name implies (vita—life) vitamins are chemical substances of vital importance. They occur in food in very minute forms. It has been found that about 110 pounds of rice polishings contain only 6 grains of the

active principles. So it is quite evident how extraordinarily minute traces of such substances are responsible for regulating the physiological mechanism.

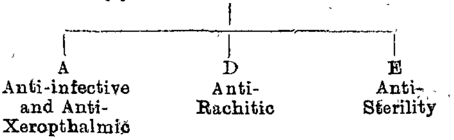
It was detailed in the sixteenth century that many people in the ships died of a typical disease due to lack of vitamins. Though vitamin was unknown at that time this much could be ascertained that the disease was perhaps due to the monotony of ship diet which composed only of hard tacks and salted meat. Vegetables were unknown in ships at that time. Sir R. Hawkins first detected it and he cured a crew with only lemon juice. Thus the value of lemon juice became established and by the end of the 18th century its use in British ships was made compulsory.

Similar is the case with Beri Beri. It was first detected in Japan navy in the latter part of the 19th century. Had not they used polished rice in their navy they would not have fallen victims to that dreadful disease.

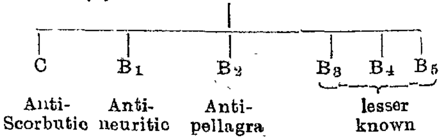
We know that there is a certain substance contained in minute traces in fresh fruits and in actively living plant tissue which is necessary for animal life. If it is absent or deficient in the diet the disease occurs. The freshness of food and the conditions of storage have much influence over the amount of vitamin present in edible substances. The more fresh and less exposed to heat the foodstuff is, the more vitamin it is likely to contain.

Uptill now 9 vitamins have been recognised and their importance known. But only six of them are familiar. They had no popular names and it was difficult to name them according to their organic compounds. Hence they have been named as: A, $B_1$, $B_2$, $B_3$, $B_4$, $B_5$, C, D, E. They may be divided into two groups (*a*) fat soluble and (*b*) water soluble.

**(a) Fat soluble Vitamins**




**(b) Water soluble Vitamins**




(*To be continued.*)

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## HONEY IN THE DIET OF INFANTS

*J. Comby thinks it much to be regretted that some prejudice appears to have arisen of late years against the use of honey in infant feeding. He extols the easy digestion of the abundant carbohydrate, calcium, and especially vitamin B content, while its iron phosphates are equally valuable. Then too it may often save the formation of an aperient habit from its laxative powers, and its ease of preservation is unrivalled among human food-stuffs. Comby quotes the diet of a sanatorium in Switzerland where an astonishing increase of body-weight and hæmoglobin occurred in marasmic children fed exclusively on warmed (but otherwise untreated) milk to which a drachm of honey gradually increased to a half-ounce was added twice daily. In these cases there was never any question of tolerance.* (PARIS: ARCHIVES DE MEDICINE DES ENFANTS)—MEDICAL WORLD.

# Breathing System of the Ancients

*By*

R. Rajagopalan, B.A.

Breath is life. Life's last ebb is the gradual cessation of breath. When the breath stops, death has caught hold of the body, which in a few hours putrefies. Stinking smell emanates from the body which had been the pride of its possessor a few moments ago. As long as there is breath in the body, the man is said to live. As such, the importance of breath in one's life is great.

Without the elaborate paraphernalia of a laboratory, electrical devices and apparatus for measurements, our sages of the past have delineated a system of breath control which is being scientifically proved as very efficient by modern scientists and health culturists. They have calculated, taking for their standard a man six feet high with normal health, that the number of respirations in a day are 21,600 at the rate of 15 per minute. Further they have found out that breath is measurable in lengths, that normal exhalation is nine inches long and that the length of the breath varies according to the exertion undergone by a man. Thus one exhalation measures 15 inches while eating, 18 inches while walking and 22½ inches while sleeping and a greater length while doing physical exercises. It is said that a man's whole span of life can be measured into so many inches and prudent saving of breath elongates the life of a man. Pranayama is the system of breath control by which the life's span is increased.

Our sages made a secret of every knowledge. Their Sishyas were precluded from divulging their secrets and were warned of great sufferings and sin by violating their instructions. Thus this system of breath control was passed on from age to age through a very few disciples. As a fact only an insignificant section of the Indian nation, the Brahmins were practising Pranayama as one of their daily round of duties and it is not untrue that they were mentally sound. I say "were" because even the orthodox brahmin of present times does his Sandhyas mechanically without the practice of Pranayama and even the priests do not teach this science to boys entering Brahmacharya. As a result of this, intelligence and mental capacity of the Brahmin are being dissipated. Why did our ancient sages keep this science a secret? Modern men may think that it was due to their intolerance, ignorance and conservatism. However simple these secrets may appear, their reactions are great. By improper use great dangers may follow. The secret may pass on to an unscrupulous man with very unhealthy habits to his utter ruin. So they picked their men who are worthy to be trusted and instructed. All these to say that Pranayama, though simple to practise, must be done with great precautions.

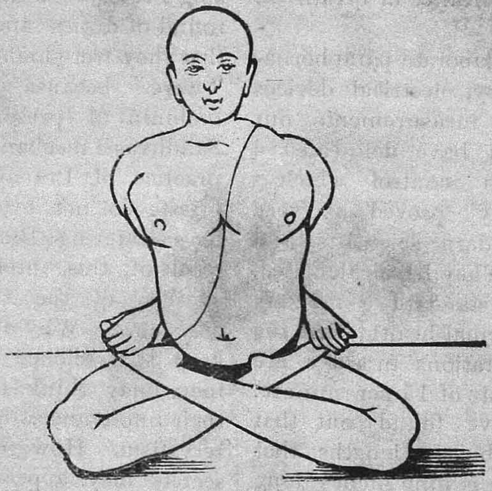
Three essentials to practise Pranayama are good place, suitable time and moderate food. In the selection of place one should be careful to pitch upon a place hidden from public view

with pure and holy environments. Swami Vivekananda suggests a room set apart in the house, kept holy and pure, entirely for the use of the practitioner. Such a room keeps the mind free from unholy and filthy thoughts and also keeps the man free from unnecessary interference of prying children, friends and relatives. As regards time for the commencement of Pranayama, Spring and Autumn are said to be the best out of the six seasons in a yeair. These correspond to March and April, September and October months according to the English Calendar.

The next aid to Pranayama is moderate food. Nutritious food is essential and condiments must be avoided. "Easily digestible, agreeable, cooling and sweet food to nourish the elements of the body" should be taken. Acid and pungent foods must be avoided. Green and fresh leafy vegetables, wheat chappatis, unpolished rice and milk are good. Food should fill up half the stomach and water one fourth. The rest should be kept empty for the passage of air.

Early morning baths, fasting and physical strain are to be avoided. Besides these it is said that "nadis" (nerve vessels) must be cleaned. There are two ways of cleaning, one is mental cleaning by good thoughts and relaxation; the other is physical cleaning by "dhautis" as related in my previous article.

The next important precaution is the sitting posture. Asanas are given for doing pranayama. Padmasan and Swastikasan are said to be the best. The back should fall in line with the neck and one should sit erect so that no strain is given to the "Sushumna Nadi" or the Spine, which in this posture hangs freely.



*Badha Padma Asan*

Now about the Pranayama proper. Three processes are undergone in Pranayama which in the language of the Yogins are: Puraka or inhalation, Kumbaka or retention and Rechaka or exhalation. A ratio of 1:4:2 should exist between Puraka, Kumbaka and Rechaka. Again there are three degrees of Pranayama, the lowest, middling and highest. The lowest kind runs in the ratio of 12 counts: 48:24; the middling in the ratio of 16:64:32 and the highest in the ratio of 20:80:40. The effects of these are said to be different. While practising the lowest the body perspires; the middling causes quivering of the spine and the highest causes levitation, that is the body is lifted from the ground. It is

said that the highest Pranayama causes a man to jump about like a frog. These effects are said to occur only in the initial stages and the practitioner is not to lose courage or get alarmed.

Pranayama are of different kinds. The effect of each one of them is different as they differ in the technique. While 'Suryabeda' warms the body, 'Sitali' cools it. In 'Sahita' and 'Bastrika' the breathing is stomachic. In 'Ujayi' and 'Brahmari' the exhalation is done through the mouth. 'Kevali' is an advanced stage in Pranayama. Here it is Kumbaka throughout. As no breath is spent this is said to give eternal life to the practitioner. To learn these kinds of pranayama it is necessary to seek the personal help of an expert and a little change in their technique or overstrain causes alarming effects such as bleeding, mental defects etc. *

As a means of exercise for the lungs Pranayama is the best. Kumbaka is a difficult stage in Pranayama and it is during Kumbaka that the spiritual energy is awakened and the practitioner attains realisation. Kumbaka gives the strength of an elephant to the practitioner and we have heard of yogis, slim and puny for all appearance, breaking chains, stones and performing such strong men feats. As regular habits and nutritious food are essential Kumbaka should not be practised haphazard. Lay practitioners may do well to leave this portion of Pranayama and do inhalation and exhalation only. It is not necessary to repeat "Om" even and instead one can count the period of inhalation and exhalation to maintain the proportion of 1 : 2. The following form of pranayama is simple and is advocated by the Yogic system of Physical culture.

Inhale through the left nostril and exhale slowly through the right nostril and then alternate. The posture to perform this should be an erect sitting posture in Swastik or Padmasan. Six times in the morning and six times in the evening are good. Pranayama can also be performed every three hours even, when the mind is calm.

The effects of pranayama are many. Diseases of the lungs are cured. Spiritual energy is roused. Mind is calm and the brain power is increased. Face is bright and happy.

## The Onion as a Social Problem

In the laboratory of applied physiology at Yale University, H. W. Haggard and L. A. Greenberg have been trying to find why an alliaceous odour persists in the breath after eating onions or garlic. It is generally supposed that, like ether, alcohol, and acetone, the essential oil of onion passes into the blood stream and is aerated from the blood in the lungs, so passing into the expired air. Alternative possibilities are that these oils are secreted into the saliva or that the smell comes from the stomach by way of the oesophagus. Haggard and Greenberg will have none of these hypotheses, and they seem to produce conclusive evidence in favour of their own explanation. Their initial

* For the guidance of readers I give below a few institutions in India which give instructions in Yogic culture :—Swami Kuvalayanand is running an institution "Kaivalydhama" at Lonavla. Sri Yogendra runs one in Bombay. In Ambathur near Madras a Young institution advocating Yogic Health culture is being run by Swami Yoganand, a disciple of Swami Kuvalayananda.

experiment was to give 1.5 g. of raw garlic, chewed and swallowed in the ordinary way and followed by the usual odours for a day or more. The same person *then took the same quantity* chopped in small particles but enclosed in gelatin capsules. No smell whatever was detected in the breath, except once when the subject belched three hours after taking his dose. The investigators thence passed to quantitative tests, where we need not follow them. But all the results go to show that they are right in thinking that the continuing smell of onions or garlic in the breath arises solely from particles retained in the mouth. These particles cannot be completely removed by mechanical means; to brush the teeth and tongue, to wash the mouth with soap and water or even with a 30 per cent. solution of alcohol, will not deodorise the breath. Haggard and Greenberg however are able to propose a remedy which is in fact effective namely, the rinsing of the mouth with a solution of chloramine, which liberates free chlorine in the mouth and so quickly and completely removes the offending odour. They suggest that many cases of foul breath from other local causes are probably amenable to the same simple treatment, and we hope this may be so. It is salutary, however, *to remember the story of the* American millionaire who, stimulated by advertisements, spent a large sum on a cure for halitosis: only to find afterwards that his friends did not like him any-way.—*The Lancet, 10th Aug. '35, Page 316.*

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# Diet in Pregnancy

DIET should be ample but not excessive. Good quantity of milk should be taken. Sufficient carbohydrate must be taken for neutralization of *fatty acids, maintenance of normal* alkali reserve and for helping general *nutrition and foetal growth. Proteins* and fats must be low as excessive intake *will produce toxic substance.* Eggs should not be taken more than one a day. Mild *exercise such as* walking down two miles a day is also recommended.

Toxæmia of Pregnancy is mainly due to vitamin deficiency. The fœtus, a true parasite, robs the mother of important substances of which she has an inadequate supply for her own needs. Food itself requires vitamins for full assimilation. A high protein diet requires more vitamins B and D than a mainly carbohydrate diet. Deficiency of one Vitamin interferes with the action of the others. Pregnancy requires an increased intake of all vitamins.

Administration of calcium during pregnancy is necessary to maintain the mother's calcium storage to satisfy the requirements of the fœtus in the last month of pregnancy and with the supply of calcium there should be a supply of phosphorus as well. Milk is the best source of calcium and at least 2 pints must be given a day. Other sources are cheese and green vegetables. Eggs for phosphorus and vitamin D in the form of cod-liver oil for calcium metabolism must be *used.*

Addition of iron in the form of iron and ammonium citrate, liver extracts and marmite (autolysed yeast) will easily solve the problem of anæmia of pregnancy. (From a discussion at the Royal Society of Medicine).—*" Clinical Digest ", Page 103 for July '35.*

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# Health News and Notes

**The utility of beard.**—Dr. Charles Hooper, Coeur d' Alene, Idaho, U.S.A. writes as follows:—

A writer advocates the use of the electric needle to eliminate the beard, and so save the large amount of time spent in shaving.

Why this horror at thought of a beard? Men let hair grow on the head, why not let it grow on the face? A man is ashamed of a bald spot on his head; yet he makes his entire face bald, and shamlessly deprives himself of a beard, the symbol of manhood.

A beard or moustache gives strength, character, individuality, and distinction to face and bearing, and marks the difference between man and woman. In their hearts women like moustaches and beards, and secretly admire and respect bearded men more than they do smooth-faced men. Women affect to dislike moustaches and beards simply because style—woman's master—has placed the beard under a ban. Hair about the nostrils and mouth strains out harmful dust and germs. A beard protects the throat from cold.

The moustache and beard are coming back. With them will come back man's old authority over woman. No wife ever got a divorce from a bearded patriarch. A bearded man tries to live up to his beard. He is dignified, as becomes a man. Why should a full-grown man have a smooth face like a boy or a babe?

The good Lord made the moustache and beard because he meant men to wear them. Those who make fun of a beard make fun of Jesus Christ who wore a beard.

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**Fine Specimens of Humanity.**—The Russian peasant of the Steppes and Siberia is perhaps as good a specimen as any of the qualities attributed to the joys (or otherwise) of mono-dieting. Vegetables, wheat, oats, and barley are their principal foods and their drinks are made from cereal extracts. The Cossacks of Russia are amongst the finest and hardiest in the world—a fact attributed to their diet and the extreme conditions under which they are trained.

The Zulus, the Sikhs, and other Asiatics are to be numbered, physically, amongst the finest races, all of whom are restricted to what amounts to a mono-diet by the customs of their tribes. It is a well-known fact that, until the "white" man introduced his vices, the Kaffirs took a foremost place for physique and endurance. The female "uncivilised" Kaffir, for instance, is capable of covering vast tracts of territory, carrying a heavy load over rough country, with no food. Kaffirs practically live on what is known as "mealies." The Kaffirs are (or were) known to the discerning as "bronze Greek gods."—*Extracted from 'Health for All'.*

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**Living on curd only**—Srimati Sabitri Rani Devi of Ranghat, Naida, said to be about 25 years of age, is living on half a seer of curd daily for the last 14 years. She has no taste for rice. If however she would take even a small quantity of it, she cannot retain it and

at once vomit it out. She is quite hale and hearty and is the mother of a few children.—*The Sanatanist*

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**Houses Must Have Bathrooms.**—The new Housing Bill of England contains some clauses that forbid overcrowding, and require that all new houses have a bath in a separate bathroom. When we realize how essential a bathroom is for the health of a family, we see what a wise provision this is and what a great social advance it is. It is a rule that India sadly needs, especially in the cities. In the most crowded parts of any Indian city, thousands of houses are without even a latrine!—*The Treasure chest.*

# Book Reviews

**Tha Frustration of Science.**—*By Sir Daniel Hall*, F.R.C.S., *J. G. Crowther, J. D. Bernal, Prof. V. H. Mottram, Enid Charles, P. A. Gorer, and Prof. P. M. S. Blackett*, F.R.S., with a foreword by Prof. Frederick Soddy, F.R.S. Published by Messrs. George Allen and Unwin Ltd., London. Price 3 sh. 6d. net.

With the rapid growth of modern Science and the application of its principles to the betterment of the human race, one would expect a happy and contented world, but alas! the reverse happens to be the case now. Science is being prostituted to selfish ends by nations as well as individuals, its constructive possibilities being stultified and destructive possibilities developed. Whether in the field of agriculture, or aviation industry or medicine, in contraceptive methods, or the spreading of bacterial infection, the same tale of destructive purpose is told and the book under review is replete with such instances. This is a book to be read by one and all, statesmen, politicians, scientists, social workers and laymen for them to ponder over and decide how best Science could be utilized for the prosperity and welfare of humanity.

**The New Outlook.**—Edited by *Mr. Govindlal D. Shaw* and published in Delhi. Annual Subscription Rs. 1/8.

We welcome the advent of this journal just at this opportune moment, when the country is about to shoulder a great responsibility in the art of self-government. From the contents of its first volume, we find the Editor has not only a new but also a broad outlook and problems, social, political and economic have been discussed in a lucid manner, leaving no doubt about their educative value. We wish the journal good luck and long life.

**Ideal Home.**—Edited by *Mr. Em. Airi* and published in Amritsar. Annual subscription Rs. 1—8—0.

This is a magazine dealing with Health, Sex and Social problems. There are useful articles on Sex topics which are generally taboo and in so far as the magazine keeps itself within bounds of decency and intends to clear the mysteries of the Sex and warn the readers—youngsters at puberty and adolescents—of the real dangers arising from the transgression of sex-laws, this magazine is sure to fill a real want. It is a bold adventure, no doubt, and we wish the magazine all success.